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NAS WHITING FIELD
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MONTHLY PROGRESS REPORT FOR PHASE 2A REMEDIAL INVESTIGATIONS DURING MAY 1993 WITH TRANSMITTAL NAS WHITING FIELD FL

6/4/1993

ABB ENVIRONMENTAL

ABB
ASEA BROWN BOVERI

03.04.00.0015
ID-00195

June 4, 1993

Commanding Officer
ATTN: Kim Queen, Code 1859
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
Charleston SC 29411-0068

SUBJECT: **Monthly Progress Report**
Remedial Investigation - Phase IIA
Naval Air Station Whiting Field, Milton, Florida
Contract Task Order 050
Contract N62467-89-D-0317

Dear Kim:

Enclosed please find the monthly progress report for the Remedial Investigation (Phase IIA) work conducted at NAS Whiting Field during May 1993. An updated project schedule is also enclosed.

If you have any questions, please call me at 904-656-1293 (ext. 314). We look forward to working with you on the completion of this project.

Very truly yours,

ABB ENVIRONMENTAL SERVICES INC.

Rao V.R. Angara
Task Order Manager

cc: File: 7560-- (11.2.1)
Eric Blomberg, ABB-ES (w/o attachments)
Jim Holland, NASWF (w/o attachments)
Robert Pope, USEPA (w/o attachments)
John Bleiler, ABB-ES (w/o attachments)
Field Trailer (w/o attachments)
Charlie Manos, ABB-ES (w/o attachments)

ABB Environmental Services, Inc.

2590 Executive Center Circle East
Berkeley Building
Tallahassee, FL 32301-5023

Telephone (904) 656-1293
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MONTHLY PROGRESS REPORT
Naval Air Station Whiting Field
May 1993

A. TECHNICAL DESCRIPTION OF TASKS CONDUCTED DURING THIS REPORTING PERIOD

I. Geophysical Survey: Response to agency comments on the Geophysical Survey Technical Report were presented during the TRC meeting held on 20 May 1993. A copy of the Navy response to USEPA comments is attached (Attachment A).

II. Soil Gas Survey: FDER comments on the Soil Gas Technical Report were submitted to the Navy during the TRC meeting. Response to comments will be submitted as soon as they are completed.

III. Technical Memorandum Preparation: The Final Draft Technical Memorandum No. 1 (Surface Water and Sediment Assessment) was submitted on April 14, 1993. The contents of the technical memorandum were discussed during the TRC meeting held on 20 May 1993. Review comments from the Florida Department of Natural Resource were received in May 1993. Comments from the USEPA and FDER have not been received to date.

IV. Data Validation: Analytical data was submitted to C.C. Johnson and Malhotra for NEESA Level C and Level D validation per USEPA and NEESA validation guidelines. Data validation reports are being received on a regular basis. All new data is being added to the NAS Whiting Field database being maintained by ABB-ES.

V. Elevation and Location Survey: Northwest Florida Engineering is conducting the elevation and location survey at NAS Whiting Field. All sampling locations are being surveyed and included in the CAD file being created to accommodate the survey data. Future survey locations will be added to the CAD file as a separate layer. This will allow the production of separate drawings for each event and also provide a database for future work.

During this reporting period, ABB-ES received a CAD file containing the test pitting and soil boring locations from the subcontractor. This data will be added to the existing data base and individual site maps will be generated to assist the project team in preparing data releases for surface soil and subsurface soil sample results.

VI. Monitoring Well Installation Program: The monitoring well program was initiated in January/February 1993. To date, about 48 monitoring wells have been installed. The protective casing, concrete pads, and protective posts are being completed at the end of each shift. Attachment B presents the shift reports

submitted by the FOL for all work completed in May 1993.

VII. Photography and Video Documentation: Mr. Keith Peterson and Ms. Sandy Calhoun participated in the preparation of a field program overview video for the 20 May 1993 TRC meeting held at NAS Whiting Field. Copies of the videotape were presented to the Commanding Officer, NAS Whiting Field and the EIC. The TRC presentation also included the preparation of about 50 slides depicting field techniques and results and findings of the geophysical survey, soil gas survey, and surface water and sediment sampling.

IX. Technical Review Committee Meeting: The second TRC meeting was conducted at NAS Whiting Field on 20 May 1993. The meeting was attended by all TRC members, except the Natural Resource Trustees. Attachment C presents the meeting minutes and the list of the participating members. At the end of the TRC meeting, an unscheduled Project Managers meeting was conducted. The participating members included personnel from FDER, USEPA, Southern Division, NAS Whiting Field, and ABB-ES. The meeting roster and the minutes are included in Attachment C.

B. STATUS OF WORK TO DATE

- Geophysical survey field program has been completed. The final technical report was submitted to the regulatory agencies on February 17, 1993. Response to comments were prepared and presented to the TRC members on 20 May 1993.

- The soil gas survey field program has also been completed. The final technical report was submitted to the regulatory agencies on 10 March 1993. Response to comments were prepared and presented to the TRC members on 20 May 1993.

- The surface water and sediment sampling task has been completed. The draft Technical Memorandum was submitted on 18 March 1993 and the Final Draft Technical Memorandum was submitted on 14 April 1993.

- The final record search document was submitted to SDIV in September 1992.

- ABB-ES and SDIV met with the U.S. Environmental Protection Agency (USEPA), National Oceanic and Atmospheric Administration (NOAA), and Florida Department of Environmental Regulation (FDER) on 13 November

1993 to discuss Navy response to agency comments for the Phase I Final Technical Memoranda. Several items involving project scope change were recommended by the agencies. These were presented in a scope change memorandum to SDIV.

- Test pitting operations (field work), as proposed in RI Phase I Technical Memorandum No. 6, have been completed.

- PCPT/BAT activities were completed on November 4, 1992. Seven PCPT soundings and 14 BAT samples were collected as planned. The Level E data was presented in the January 1993 monthly progress report.

- Data packages (surface soil, subsurface soil, surface water, and sediment sampling) are being submitted to C.C. Johnson and Malhotra for validation.

- Elevation and location survey of geophysical survey, soil gas survey, soil sampling locations, test pit locations, PCPT/BAT locations has been completed. A report for the soil gas survey, geophysical survey, surface soil sample locations, test pit locations, and soil boring locations has been received from the subcontractor.

- The soil boring program, as proposed in Technical Memorandum No. 6 (Phase I), was completed on 27 January 1993.

- The monitoring well installation program, as proposed in Technical Memorandum No. 6 (Phase I), was initiated in January/February 1993.

- The second TRC meeting was held on 20 May 1993 at NAS Whiting Field. The purpose of the meeting was to discuss the status of the field program and discuss the results and findings presented in the Technical Reports and the Technical Memorandum No. 1. The status of the Clear Creek Floodplain investigation was also discussed during this meeting.

C. PROBLEMS ENCOUNTERED DURING REPORTING PERIOD

- The activity has recommended the installation of flush-mounted wells at all well locations in the industrial area. Attachment D identifies this change.

This memo has been submitted to the activity. The EIC has been informed about this change and she will submit a letter to the activity informing them about their responsibility in the maintenance and upkeep of the monitoring wells.

D. ACTIVITIES PLANNED FOR NEXT MONTH

- TFMR and Monthly Progress Report.
- Preparation of Response to Comments - Technical Memorandum #1.
- Preparation of Final Technical Memorandum #1 (upon receipt of agency comments.
- Continue the monitoring well installation program.
- Data management and evaluation.
- Photography/video documentation.
- Preliminary water elevation survey.
- Response to comments - Technical Memorandum No. 1.

E. SCHEDULED DELIVERABLES FOR MAY 1993

- TFMR
- Monthly Progress Report.

F. CORRESPONDENCE AND DOCUMENTS RECEIVED

- Data packages for subsurface soil samples.
- CCJM data validation reports.
- Monthly Progress Reports - CH2MHILL.

G. COST IMPACTS

- A scope change notification memorandum identifying the IDW requirements has been prepared and submitted to ABB-ES contracts personnel.

H. SAMPLING AND ANALYSIS RESULTS

- Subsurface soil sample results (for some sites) were received from CH2M HILL. The data was submitted to the data validators for validation.

I. LABORATORY MONTHLY PROGRESS REPORTS

- Yes

J. PLANNED CHANGES IN PERSONNEL AND THEIR QUALIFICATIONS

- The project team comprises of the following personnel.

Rao Angara, Task Order Manager
Eric Blomberg, Technical Leader
Dr. Willard Murray, Technical Director
Salvatore Consalvi, Field Operations Leader
Kathleen Hodak, Project Assistant
Matt Alvarez, Associate Engineer
Gopi Kanchibhatla, Associate Engineer
John Bleiler, Senior Scientist (Ecologist)
Keith Peterson, Graphics and Photography
David Daniel, Public Health Specialist

K. PERCENT COMPLETION

Task	Title	% Complete
1	Project Management	35
2	Field Preparation	50
3	Geophysical Survey	100
4	Soil Gas Survey	100
5	Surface Water and Sediment Sampling	100
6	Test Pitting	90
7	Soil Sampling	65 (Subsurface & Surface Soil Sampling Completed, Data Assessment is Ongoing)
8	PCPT/BAT	95
9	Soil Boring and Monitoring Well Installation	55
10	Groundwater Sampling	0
11	Water Level Measurement	0
12	Elevation and Location Survey	50
13	Ecological Survey	55
14	Data Validation	45
15	Photography Support	55
16	Technical Memoranda Preparation	14
17	Contamination Assessment Report	0
18	Groundwater Modeling	0

Note: Photography support effort includes videotaping and photographing geophysical survey, soil gas survey, and surface water and sediment sampling events.

L. TARGET/ACTUAL COMPLETION DATES (by task)

Task	Title	Scheduled	Actual
1	Project Management	3-30-92 to 4-30-94	Started 3-30-92
2	Field Preparation	4-23-92 to 4-30-94	Started 4-23-92
3	Geophysical Survey	5-28-92 to 5-31-93	5-28-92 to 2-26-93
4	Soil Gas Survey	6-26-92 to 6-30-93	6-26-92 to 3-10-93
5	Surface Water and Sediment Sampling	7-6-92 to 8-1-92	7-6-92 to 8-1-92
6	Test Pitting	9-14-92 to 10-9-92	9-14-92 to 10-9-92
7	Surface Soil Sampling	8-3-92 to 11-10-92	8-3-92 to 10-31-92
8	PCPT/BAT	11-5-92 to 12-28-92	10-12-92 to 11-4-92
9	Soil Boring & Well Installation	1-4-93 to 2-4-94	Started 12-1-92
10	Groundwater Sampling	2-7-94 to 6-30-94	Not Started
11	Water Level Measurement	5-2-94 to 5-13-94	Not Started
12	Locational Survey	2-7-94 to 3-30-94	Started 6-30-92
13	Ecological Survey	2-5-94 to 3-13-94	Started 12-1-92
14	Data Validation	6-15-94 to 10-16-94	Started 9-15-92
15	Photography Support	5-4-92 to 6-30-94	Started 5-4-92
16	Technical Memoranda Preparation	9-1-94 to 4-4-95	Started 12-1-92
17	CA Reports	11-16-94 to 11-29-94	Not Started
18	Groundwater Modelling	---	---

Notes:
1. Task 1 includes project management tasks. Therefore it is for the duration of the project.
2. Task 2 includes the FOL effort for the complete project.
3. Shaded area indicate modifications to schedule.
4. The soil boring program was initiated ahead of schedule because the PCPT/BAT operations were completed ahead of schedule.
5. The PCPT/BAT operations were completed ahead of schedule because the cone soundings could not be conducted to the proposed depths. Also the drill rig and the cone truck were operated simultaneously.
6. Tasks 3 and 4 identify a change in completion dates because the preparation of technical reports has been added to these tasks.

ATTACHMENT A

RESPONSE TO COMMENTS
of
FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

Geophysical Survey - Technical Report
Naval Air Station Whiting Field, Milton, Florida

Comment Number	Comment	Response
	GENERAL COMMENTS	
1.	On page 3-32, the landfill area for Site 15, interpreted form the electromagnetic induction and total magnetic data set anomalies, should be figure 3-25 not 3-26 (figure 3-26 is a total magnetic isopleth map).	1. Agree. A replacement page will be provided.
2.	On page 3-32, the landfill area for Site 16, interpreted from the electromagnetic induction and total magnetic data set anomalies, should be figure 3-29 not 3-30 (figure 3-30 is a total magnetic isopleth map).	2. Agree. A replacement page will be provided.

RESPONSE TO COMMENTS
of
U. S. ENVIRONMENTAL PROTECTION AGENCY - REGION IV

Geophysical Survey - Technical Report
Naval Air Station Whiting Field, Milton, Florida

Comment Number	Comment		Response
2.	On page 3-32, section 3.2.7, it is stated that "the western boundary of these landfills can only be inferred" due to the presence of the boundary fence. It is obvious from Figures 3-29 thru 3-32 that the waste continues past the current boundary fence and that the survey area is truncated by the fence. It is entirely conceivable that the current fence cuts across the old landfill. Due to this data gap EPA does not believe that the lateral extent of Site 16 has been successfully determined to the west. It is recommended that the survey be continued on the western side of the fence in order to correctly define the lateral extent of the waste to the west.	2.	Based on the review of historical data and aerial photographs and interviews with base personnel, the western boundary of the landfill did not extend beyond the current boundary fence.
3.	Also on page 3-32 and continued on page 3-39, section 3.2.7, it is indicated that isolated anomalies were located on the eastern edge of Site 16. It was apparently determined that these anomalies were a result of uncontrolled dumping and therefore, not within "the scope of this project." Whether the disposal was controlled or not is not the concern of the investigators. All waste on the facility is within the scope of the RI/FS. Therefore, the survey was prematurely discontinued to the east. The survey should have continued until the site boundaries were reached and/or no further anomalies were detected.	3.	The reference to not being within "the scope of this project" was intended to mean that any additional areas where geophysical surveys could be conducted, would require an additional level of effort and additional costs. Not being within "the scope of this project" does not mean that wastes found outside the study areas will not be investigated. Since the inception of the RI/FS at Whiting Field, five new sites have been added to the scope of the RI/FS. All waste found on the facility should be included in the RI/FS program.

RESPONSE TO COMMENTS
of
U. S. ENVIRONMENTAL PROTECTION AGENCY - REGION IV

Geophysical Survey - Technical Report
Naval Air Station Whiting Field, Milton, Florida

Comment Number	Comment	Response
	GENERAL COMMENTS	
1.	The stated objectives of the geophysical surveys at NAS Whiting Field were to characterize landfill materials, define the lateral and vertical extent of landfill boundaries, and to identify potential plume migration pathways. In general, the lateral extent of wastes and disturbed soils was successfully mapped at most sites. However, two of the main goals of the study were unsuccessful. The vertical extent of wastes was not determined at any site and no plume migration pathways were identified. The failure of the DC resistivity survey to determine vertical extent is plausibly explained as a result of the heterogeneity of the wastes. However, no acceptable explanation is offered for the failure of plume migration pathway identification. In addition, there is no mention of attempts to identify plume pathways at the various sites.	1. The intent of the author was to identify that plume migration pathways can be determined using geophysical surveys and not that it was an objective of the investigation. The objective of the Phase II-A geophysical survey as stated in the Phase I Technical Memorandum No. 6 - Phase I Data Summary and Phase II-A Workplan, was to define landfill trenches, site boundaries, and locate buried objects.
2.	If further work is done at NAS Whiting Field trying to define the vertical extent of wastes, an alternative method should be considered. One technique with a history of success is time-domain electromagnetic (TDEM). TDEM uses a lager time range of measurement. The advantage of TDEM is a higher sensitivity and an improved vertical resolution. EPA recommends TDEM be considered in case of future work.	2. No response required.
	SPECIFIC COMMENTS	
1.	On page 2-3, section 2.1.2, it is indicated that physical barriers at a site can limit complete coverage of the investigation area. while this is a common problem and one that cannot always be effectively dealt with, it needs to be taken into account when interpreting results and making conclusions.	1. Agree.

ATTACHMENT B

ASEA BROWN BOVERI

Inter-Office Correspondence

TO: Rao Angara
cc. Eric Blomberg
Salvatore Consalvi
FROM: Gopi Kanchibhatla (FOL)
DATE: 05/13/93
SUBJECT: Monitoring Well Installation Shift X Report
DURATION: 05/04/93 - 05/13/93

WEATHER: Sunny and hot, 80-85 degrees.

ABB Personnel:

Gopi Kanchibhatla (HSO, FOL): 05/04/93 - 05/13/93
Tracey Kauffman (Team Member): 05/04/93 - 05/13/93
Salvatore Consalvi (FOL, Team Member): 05/04/93 - 05/13/93
Mark Lieberman (Team Member): 05/04/93 - 05/13/93
Donald Wong (Team Member): 05/04/93 - 05/13/93
Rao Angara (Task Order Manager): 05/11/93 - 05/12/93
Eric Blomberg (Technical Leader): 05/11/93 - 05/12/93

Groundwater Protection, Inc. (GPI) Personnel:

Team 1:
Donald H. Stevison (Driller): 05/04/93 - 05/13/93
Creig Labrosse (Helper): 05/04/93 - 05/13/93
Burgess A. Johnson (Helper): 05/04/93 - 05/13/93

Team 2:
Richard Reed (Driller): 05/04/93 - 05/13/93
Darrin Dent (Helper): 05/04/93 - 05/13/93
Eric J. Bard (Helper): 05/04/93 - 05/13/93
Mike Anderson (Runner): 05/04/93 - 05/12/93

Standby Drillers:
Bill Nilles (Supervisor): 05/07/93 - 05/08/93
Buddy Chevenort (Driller): 05/08/93 - 05/10/93

Southern Division:

Kim Queen (Engineer In Charge):

PURPOSE: To continue the installation and development of monitoring wells for the Phase II-A RI.

1.0 Executive Summary

The tenth shift of the boring and monitoring well installation portion of the Phase II-A RI was conducted between 05/04/93 and 05/13/93. A total of 12 monitoring wells were projected to be installed for this shift. The field crew installed 6 monitoring wells during the shift (see Table 1-1) including 3 surface casings (2 casings for incomplete wells).

Table 1-1. Monitoring Wells Installed During Shift X

WELLS INSTALLED	TOTAL DEPTH (FEET BLS)	Screen Interval	SURFACE CASING (FEET BLS)
RIG 1			
WHF-3-3 D	180	170-180	112.5
WHF-3-3 S	110	100-110	none
WHF-3-2 D	180	175-180	none
WHF-3-2 S	115	100-115	none
RIG 2			
WHF-6-3 S	124	109-124	none
WHF-6-1 D	Incomplete	Incomplete	112
WHF-6-1 S	Incomplete	Incomplete	112
WHF-BKG-1	118	103-118	none

2.0 Site Reconnaissance/Utility Clearance

Utility clearance for the locations of all monitoring wells borings and the mud pits completed at the Midfield and the North Field Areas during shift X was conducted during the shifts VII, VIII, and IX of the monitoring well installation program.

As of 05/13/93, GPI has provided copies of permits for all the 32 monitoring wells installed in the North Field and the Midfield Areas and the remote area sites. Mr. Rick Bryan informed Kanchibhatla that GPI is currently working on obtaining all the material specifications from individual suppliers to make the earlier package more complete. Expected time of delivery is not definite to this date.

3.0 Health and Safety

An initial health and safety meeting was conducted by Gopi Kanchibhatla (H&S Officer) prior to the commencement of drilling. Among the topics presented were emergency procedures, locations of the base and local hospitals, avoidance of accidents around the drill rigs and H&S equipment use. Daily H&S meetings were conducted each morning prior to drilling. The meetings covered various subjects including the previous days compliance with H&S procedures and first aid reviews (heat stress, symptoms of contaminants of concern, use of safety belt, proper exclusion zones, and PPE). The entire list of subjects covered throughout the project along with signatures of attendees is located in the H&S field book.

There were two incidents occurred during the shift and reported by the field crew as follows:

1. During tripping of the drilling rod from the bore hole at WHF-BKG-1, the lead helper of Rig 2 (Darrin Dent) injured his middle finger and was taken to the hospital. It has been reported that it was an external bruise to the finger, and he could not operate heavy equipment for the rest of the shift.

2. During transportation of construction material for Rig 1 the runner Mike Anderson indicated that he was suffering from chest pains. At that moment he was immediately taken to the hospital. Later it was reported that he may be suffering from weakness of heart muscles.

4.0 Audit

Audits were not conducted during Shift X.

5.0 Surveying

An elevation survey of the monitoring well clusters WHF-5-8 through WHF-5-10 was conducted for a preliminary estimation of groundwater flow direction at the Midfield Hanger Area. This would facilitate more information towards the location of the remaining wells to be installed at the Midfield Hanger Area.

The results of the survey indicated that there is about 0.24 ft of maximum closing error in the elevations, which renders the results not usable for the stated purpose. Hence it has been recommended by the technical leader, Mr. Eric Blomberg to repeat the survey during the next shift with improved accuracy.

6.0 Field Analysis

GC field analysis has been performed on the soil samples collected from the screen intervals of several monitoring wells. Compilation of the analytical results is not complete at this time. OVA is being used on a regular basis in order to analyze the head space samples from the split spoons.

7.0 Procedural Difficulties

The following procedural difficulties were encountered during the Shift X.

7.1 Monitoring Well Installation

1. During tremie grouting of the annular space between the surface casing and the riser pipe at WHF-6-1 D, the tremie pipe got stuck in the grout and as a result about 80 feet of 1 inch ID tremie was left unretrieved.

   This problem has been a repetition and the field crew has advised the drilling crew to remove the tremie out of the grout at constant intervals as the bore hole is being grouted as instead of waiting till the bore hole is completely grouted.

2. During the retrieval of the hallow stem augers from the bore hole at WHF-6-3, the field crew has noticed that the bolts of the lead auger were subjected to shear failure and as a result the lead auger was left unretrieved at about 85 feet bls.

compromise the purpose of a shallow well and would provide better focus for the investigation.

2. A modification in the well completion technique has been made in order to incorporate the recommendations of Mr. Holland (NAS Whiting Field) and the SOUTHDIV.

   Flush mount completion technique instead of above ground completion has been proposed to be used for all the monitoring wells located in the industrial area.

Flush mount completion has the following specifications:

a. Use 'TC-242' type manhole (see attached Figure) with a provision for drainage of the manhole.

b. Use a lockable (pad lock) cap for the PVC raiser.

c. Use 2 feet X 2 feet concrete pad, thickness 6 inches, 2 inches above ground and the remaining 4 inches below the ground.

ASEA BROWN BOVERI

Inter-Office Correspondence

TO: Rao Angara
cc. Eric Blomberg
FROM: Salvatore Consalvi (FOL)
DATE: 05/28/93
SUBJECT: Monitoring Well Installation - Shift XI Report
DURATION: 05/17/93 - 05/27/93

WEATHER: Sunny and warm, 75-85 degrees, at times, overcast and rainy.

ABB Personnel:

Gopi Kanchibhatla (HSO): 05/17/93 - 05/27/93
Alan Workman (Team Member): 05/17/93 - 05/27/93
Salvatore Consalvi (FOL): 05/17/93 - 05/27/93
Mark Lieberman (Team Member): 05/17/93 - 05/27/93
Donald Wong (Team Member): 05/17/93 - 05/27/93
Rao Angara (Task Order Manager): 05/19/93 - 05/21/93
Eric Blomberg (Technical Leader): 05/19/93 - 05/21/93
Kathy Hodak (Project Assistant): 05/19/93 - 05/21/93

Groundwater Protection, Inc. (GPI) Personnel:

Team 1:
Donald H. Stevison (Driller): 05/17/93 - 05/27/93
Creig Labrosse (Helper): 05/17/93 - 05/27/93
Ian McCourt (Helper): 05/17/93 - 05/21/93
Tim Smith (Helper): 05/22/93 - 05/27/93
Mike Brent (Developer): 05/17/93 - 05/27/93

Team 2:
Richard Reed (Driller): 05/17/93 - 05/27/93
Russell Evert (Helper): 05/17/93 - 05/21/93
Eric J. Bard (Runner): 05/17/93 - 05/27/93

Standby Drillers:
Bill Nilles (DOM): 05/17/93 - 05/27/93

Southern Division:

Kim Queen (Engineer In Charge): 05/19/93 - 05/20/93

Florida Department of Environmental Regulation:

David Clowes (Remedial Project Manager): 05/19/93 - 05/20/93
Jorge Caspary (Remedial Project Manager): 05/19/93 - 05/20/93

U.S. Environmental Protection Agency:

Robert Pope (Remedial Project Manager): 05/20/93 - 05/21/93

PURPOSE: To continue the installation and development of monitoring wells for the Phase II-A RI.

1.0 Executive Summary

The eleventh shift of the soil boring and monitoring well installation portion of the Phase II-A RI was conducted between 05/17/93 and 05/27/93. A total of 12 monitoring wells were projected to be installed during this shift. The field crew installed 7 monitoring wells during the shift (see Table 1) including 5 surface casings (3 casings for incomplete wells). GPI developed 8 wells during the shift.

Table 1
Monitoring Wells Installed During Shift X

WELLS INSTALLED	TOTAL DEPTH (FEET BLS)	Screen Interval	SURFACE CASING (FEET BLS)
RIG 1			
WHF-3-7 D	180	175-180	109
WHF-3-7 I	140	135-140	109
WHF-3-1 D	Surface Casing Installed	N/A	104
WHF-3-1 S	Surface Casing Installed	N/A	105
RIG 2			
WHF-33-5	125	110-125	none
WHF-6-1 D	180	175-180	112
WHF-6-1 S	133	118-133	112
WHF-30-1	Boring	N/A	none
WHF-5-OW-2A	Surface Casing Installed	N/A	117
WHF-32-5	109	94-109	none

2.0 Site Reconnaissance/Utility Clearance

With the exception of WHF-30-1 (cleared this shift), utility clearance for the locations of all monitoring wells, soil borings, and the mud pits was completed at the Midfield and the North Field Areas during Shift XI was completed during the earlier shifts.

As of 05/13/93, GPI has provided copies of permits for 32 monitoring wells installed in the North Field and the Midfield Areas and the remote area sites.

3.0 Health and Safety

An initial health and safety meeting was conducted by Gopi Kanchibhatla (H&S Officer) prior to the

commencement of drilling. Among the topics presented were emergency procedures, locations of the base and local hospitals, avoidance of accidents around the drill rigs and H&S equipment use. Daily H&S meetings were conducted each morning prior to drilling. The meetings covered various subjects including the previous days compliance with H&S procedures and first aid reviews (heat stress, symptoms of exposure to contaminants of concern, eye injuries, proper exclusion zones, and PPE). The entire list of subjects covered throughout the project along with signatures of attendees is located in the H&S field book.

There were no incidents or injuries reported during the shift.

4.0 Audit/Meetings

Audits were not conducted during Shift XI.

A Technical Review Committee (TRC) meeting was conducted on 05/20/93. Personnel from NAS Whiting Field, Southern Division, USEPA, FDER, Santa Rosa County officials, and ABB-ES attended the meeting.

On 20-21 May 1993, the FOL accompanied Mr. Robert Pope of the USEPA to all the RI sites, the North and South field tank farms, and the floodplain.

5.0 Surveying

An elevation survey of the monitoring well clusters WHF-5-8 through WHF-5-10 was conducted for a preliminary estimation of groundwater flow direction at the Midfield Hangar Area. This information will be used to better locate the remaining wells to be installed at the Midfield Hangar Area.

The results of the survey indicated that there is about 1 foot of maximum closing error in the elevations. This renders the results unusable for the stated purpose. Hence it has been recommended by the technical leader, Mr. Eric Blomberg to repeat the survey during the next shift with improved accuracy.

6.0 Field Analysis

GC field analysis has been performed on the soil samples collected from the screen intervals of several monitoring wells. Compilation of the analytical results is not complete at this time. OVA is being used on a regular basis in order to analyze the head space samples from the split spoons.

7.0 Procedural Difficulties

The following procedural difficulties were encountered during the Shift XI.

7.1 Monitoring Well Installation

1. While advancing the borehole at WHF-5-OW-2A, clay was recovered from the 115-117 foot split spoon and the driller reported that the lithology changed at approximately 112 feet. A continuous spoon was taken from 117-119 in which sandy clay was encountered. The following spoon also contained sandy clay. The decision was made to set the casing at 115 feet based on the assumption that the continuous spoons were being collected through the hole from the previous spoon without advancing the augers. It was later learned that the layer was indeed drilled through. The actual (unbreached) confining layer has a higher percentage of fine sand than is typical at NASWF.

2. The intermediate well, WHF-3-7I, was installed at a depth 10 feet shallower than proposed in Technical Memorandum No. 6. The engineer on-site failed to review the information provided prior to instructing the driller of the depth.

7.2 Mechanical Delays

The following mechanical failures have been noticed during the drilling operations in Shift XI:

1. Winch lines on Rig-1 broke once causing limited down time.

2. The break out table on Rig-2 was damaged and repaired twice during the shift. This resulted in limited down time.

3. The pumps on Rig-1 burned out resulting in approximately 5 hours of down time.

7.3 NASWF/Base Issues

During the use of wash rack area (Friday May 5, 93) for IPA rinse and DI water rinse of the equipment, the field crew has reported that the wash rack was not clean and the trough was filled with mud. Mr. Jim Holland was informed on Monday of the condition of the area in order to avoid an unnecessary complaint.

8.0 Deviation from Workplan

8.1 Monitoring Well Location

Monitoring wells were located using information gathered thus far during Phase II-A. Locations may differ from the maps in the workplan and/or Technical Memorandum No. 6. The exact depths of wells and screen intervals are determined in the field based on site specific conditions. Rationale for such modifications are recorded in field log books and drilling summaries.

ATTACHMENT C

TECHNICAL REVIEW COMMITTEE MEETING
LIST OF ATTENDEES:

Robert H. Pope	USEPA-Region IV
Kim Queen	SOUTHDIV-NAVFACENGCOM
James Holland	NASWF Public Works Office
Capt. Jim Eckart	Commanding Officer, NASWF
Jerrell Anderson	NASWF Public Works Office
Rao Angara	ABB-ES
Eric Blomberg	ABB-ES
Kathy Hodak	ABB-ES
Salvatore Consalvi	ABB-ES
David M. Clowes	FDER - Tallahassee
Jorge R. Caspary	FDER - Tallahassee
Mike Planert	U.S.G.S.
Jerry Giese	U.S.G.S
Ernie Padgett	Santa Rosa County
Susan Goggin	FDNR - Tallahassee
Lynn Griffin	FDNR - Tallahassee
Ludwig H. Opager	NASWF Public Works Office

Technical Review Committee (TRC) Meeting Minutes
Naval Air Station Whiting Field
May 20, 1993
10:00 a.m.

Introduction

The meeting began with Captain Eckart, Commanding Officer (CO), Naval Air Station (NAS) Whiting Field, Milton, Florida, welcoming all participants. He noted the absence of Mr. Alton Harris and that he was happy to be attending his 3rd TRC meeting in his tenure at NASWF. He then turned over the meeting to Ms. Kimberly Queen, Engineer-in-Charge (EIC), Southern Division (SDIV) Naval Facilities Engineering Command.

Phase II-A Remedial Investigation (RI) Update

Ms. Queen began by stating her role as a representative of SDIV, which is the organization responsible for conducting the Installation Restoration (IR) program in the Southeastern United States. After stating the purpose and legislation which authorized the initiation of an IR program, Ms. Queen briefly explained the three components of the IR Program: 1) Preliminary Assessment/Site Inspection, 2) Remedial Investigation/Feasibility Study, and 3) Remedial Design/Remedial Action and Long-term Monitoring. Ms. Queen asked that everyone in attendance introduce themselves and give their affiliation. She then introduced and presented an 8 minute video that summarized the Phase II-A RI field tasks that have been completed or are currently underway. The video was prepared by ABB Environmental Services, to document the Phase II-A RI field program and also to be used as an informational source at future public meetings.

Phase II-A Remedial Investigation Field Program Summary

After presentation of the video, Ms. Queen introduced Mr. Rao Angara, Task Order Manager for NAS Whiting Field, ABB Environmental Services, Inc. Mr. Angara discussed the meeting agenda (attached). He gave a brief summary of the project to date, as requested by Captain Eckart.

Mr. Salvatore Consalvi, Phase II-A RI Field Operations Leader (FOL) was introduced and proceeded to explain the field program at NAS Whiting Field. Mr. Consalvi gave a slide presentation that described all field activities conducted to date, including: geophysical survey, soil gas survey, surface water and sediment sampling, test pitting, surface soil sampling, soil borings and monitoring well installation. The presentation covered specific details concerning sampling locations, number of samples collected, types of analysis, etc.

The Piezocone Penetrometer and Bengt-Arne-Torstensson (PCPT/BAT) exploration task was explained by Mr. Eric Blomberg, Technical Leader on the project. The slide presentation continued with Mr. Blomberg explaining the procedures and identifying specific sampling locations on the base map.

After a short break, the meeting resumed with Mr. Blomberg discussing the objectives, scope and results of the Geophysical Survey Technical Report. He pointed out that Navy responses to comments received from the USEPA and FDER had been provided in the handout. Specifically, he commented on the USEPA's concern that the landfill may extend beyond the fence boundary by explaining that no physical evidence of this extension was found and that a monitoring well has been drilled which met with no landfill refuse.

Phase II-A RI Field Changes

Mr. Blomberg also noted that during a field program changes to the proposed scope may be required. Field changes for the Phase II-A RI field program were documented as they occurred and are summarized in the handout provided. He briefly discussed each field modification and presented the rationale behind each decision.

Technical Reports and Technical Memorandum 1 Discussion

Continuing with the slide presentation, Mr. Blomberg gave an overview of the objectives, scope and results of both the Soil Gas Technical Report and Technical Memorandum No. 1 (Surface Water and Sediment Assessment). Recommendations for no further exploration of the surface water and sediments of Clear Creek and further exploration of the Clear Creek Floodplain sediments were given. He identified the information provided in the handout.

Clear Creek Floodplain Investigation Summary

Mr. Blomberg discussed the objectives and scope of the Clear Creek Investigation. He informed the TRC that a 55 gallon drum was discovered in this area during an ecological survey conducted in December 1992. In March 1993, at the request of FDER, the drum was removed as shown in the slides. Mr. Blomberg explained that a geophysical survey conducted in this area identified an anomaly in the bog of the Clear Creek Floodplain. He specifically identified each area and level of Total Petroleum Hydrocarbon (TPH) contamination as depicted in a slide, and reproduced in the handout.

Questions and Comments

Mr. Angara in his introductory discussion, indicated that any questions, comments or suggestions, even at a later date, would be most welcome. Several questions were asked both during and following the conclusion of both Mr. Salvatore Consalvi and Mr. Eric Blomberg's presentation. The individual questions, in the order they were asked, and the technical responses to the questions are detailed below:

- Mr. Jerry Giese, U.S.G.S., asked if surface water samples had been taken from anywhere in the floodplain?

  Mr. Eric Blomberg, ABB-ES, responded, yes - sample stations 4, 7, and 9, and pointed to their approximate locations on the map.

- Ms. Lynn Griffin, F.D.N.R., asked if the next step in the process would be an ecological survey?

  Mr. Eric Blomberg responded that a Baseline Risk Assessment had been planned. Mr. Rao Angara further stated a Workplan for the Ecological and Public Health Assessment would be produced first.

- Mr. Jim Holland, NASWF-Public Works, asked how much longer it would take to complete the program?

  Mr. Eric Blomberg responded that at this time the field program is scheduled to be complete in 4 to 6 months. Mr. Rao Angara agreed, but noted that if data gaps were identified, the program may continue for 6 to 8 months.

- Ms. Lynn Griffin also asked whether ABB-ES felt that they had adequately discovered the extent of the contamination in the floodplain and that there was no need to continue North or further out?

  Mr. Blomberg responded that an extensive investigation of the area had been conducted and ABB-ES was confident about the results. Captain Eckart further commented that NAS Whiting Field was very concerned about the contamination at Clear Creek.

- Mr. David Clowes, FDER, asked why a sample was not collected from the Big Coldwater Creek floodplain?

  Mr. Blomberg responded by saying that contaminants would have to be transported over a mile through unlined ditches. Therefore, it is highly unlikely that the floodplain of Big Coldwater Creek would exhibit any significant levels of contamination.

Adjourn

Captain Eckart closed the meeting.

Site Visit

Immediately following the TRC meeting an unscheduled project manager's meeting was held at FDER's request, after which a site visit was conducted of the NAS Whiting Field RI/FS sites. A tour of all the sites was given by ABB-ES Field Operations Leader, Salvatore Consalvi for USEPA representative Mr. Robert Pope. Mr. Jim Holland also gave a tour of the sites to FDER representatives, Mr. David Clowes and Mr. Jorge Caspary.

AGENDA

Phase II-A RI Summary
Technical Review Committee Meeting
NAS Whiting Field
Milton, Florida
May 20, 1993 at 10:00 am

- **Introduction - Capt. Jim Eckart, NASWF CO**

- **RI/FS Update by SDIV EIC, Ms. Kim Queen**

- **Phase II-A RI Field Program Summary, ABB-ES**
  - Geophysical Survey
  - Soil Gas Survey
  - SW/SD Sampling and Technical Memorandum No. 1
  - Test Pitting
  - Surface Soil Sampling
  - PCPT/BAT Explorations
  - Soil Borings and Subsurface Soil Sampling
  - Monitoring Well Installation

- **Phase II-A RI Field Changes, ABB-ES**

- **Technical Reports and Technical Memorandum No. 1 Discussion**

- **Clear Creek Floodplain Investigation Summary**

- **Questions and Discussion**
  - Site 5 No Further Action

- **Adjourn**

ATTACHMENT D

MEMORANDUM

TO: RAO ANGARA
FROM: ERIC BLOMBERG EB
DATE: 5-5-93
SUBJECT: PHASE II-A SURFACE COMPLETION OF MONITORING WELLS AT NAS WHITING FIELD

Based on recent concerns (of the activity, NAS Whiting Field) for base personnel safety and esthetics it has been requested by the activity that flush-mounted protective vaults be installed at certain grass covered locations, instead of stick-up protective casings with bumper posts. As directed by the SDIV EIC Ms. Kim Queen, flush-mounted protective vaults can be installed at these locations upon the request of the activity. The flush-mounted protective vaults will be a minimum of 6 inches in diameter and the concrete pads around the vault will be 2 feet by 2 feet square and 8 inches thick. The pad will be installed level with 4 inches below grade and 4 inches above grade.

If the activity wants previously installed protective casings or bumper posts removed, it will be the activity's responsibility to remove them. If, during the removal of any protective casings or bumper posts, any monitoring well is damaged, it will be the activity's responsibility to replace the damaged monitoring wells.